

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A process for preparing a functionalized, branched polyurea, the process consisting of reacting, at a temperature of from 100 to 150°C, at least one urea, at least one thiourea, or a combination thereof with at least one amine having at least three primary and/or secondary amino groups, and optionally, at least one amine having at least two primary and /or secondary amino groups, to form the functionalized, branched polyurea;

wherein any amine or combination of amines reacted with the at least one urea, at least one thiourea, or a combination thereof, has an average amine functionality of from 2.1 to 10,

wherein the at least one urea, at least one thiourea, or a combination thereof is selected from the group consisting of urea, thiourea, ethyleneurea, 1,2-propyleneurea, 1,3-propyleneurea, N,N'-diphenylurea, N,N'-ditolylurea, N,N'-dinaphthylurea, N-methyl-N'-phenylurea, N-ethyl-N'-phenylurea, N,N'-dibenzylurea, N,N'-dimethylurea, N,N'-diethylurea, N,N'-dipropylurea, N,N'-dibutylurea, N,N'-diisobutylurea, N,N'-dipentylurea, N,N'-dihexylurea, N,N'-diheptylurea, N,N'-dioctylurea, N,N'-didecylurea, N,N'-didodecylurea, carbonylbiscaprolactam, ethylenethiourea, propylenethiourea, N-methylthiourea, N-ethylthiourea, N-propylthiourea, N-butylthiourea, N-phenylthiourea, N-benzylthiourea, N,N'-dimethylthiourea, N,N'-diethylthiourea, N,N'-dipropylthiourea, N,N'-dibutylthiourea, N,N,N',N'-tetramethylthiourea, N,N,N',N'-tetraethylthiourea, thiocarbonylbiscaprolactam, and combinations thereof,

wherein, optionally, the reacting is conducted in the presence of a solvent,
wherein, optionally, the reacting is conducted in the presence of at least one catalyst,
wherein, optionally, an amine liberated during the reacting is separated off by
distillation, and
wherein, optionally, the functionalized, branched polyurea is, post formation, subject
to a subsequent functionalization.

Claim 2 (Previously Presented): The process according to claim 1, wherein the
process further consists of reacting the at least one urea, the at least one thiourea, or the
combination thereof with the at least one amine having at least three primary and/or
secondary amino groups, and the at least one amine having at least two primary and /or
secondary amino groups, to form the functionalized, branched polyurea, and
wherein the at least one amine having at least two primary and/or secondary amino
groups is selected from the group consisting of ethylenediamine, an N-alkylethylenediamine,
propylenediamine, 2,2-dimethyl-1,3-propanediamine, N- alkylpropylenediamine,
butylenediamine, N-alkylbutylenediamine, pentanediamine, hexamethylenediamine, N-
alkylhexamethylenediamine, heptanediamine, octanediamine, nonanediamine,
decanediamine, dodecanediamine, hexadecanediamine, tolylenediamine, xylylenediamine,
diaminodiphenylmethane, diaminodicyclohexylmethane, phenylenediamine,
cyclohexylenediamine, bis(aminomethyl)cyclohexane, diaminodiphenyl sulfone,
isophoronediamine, 2-butyl-2-ethyl-1,5-pentamethylenediamine, 2,2,4- or 2,4,4-trimethyl-
1,6-hexamethylenediamine, 2-aminopropylcyclohexylamine, 3(4)-aminomethyl-1-
methylcyclohexylamine, 1,4 diamino-4-methylpentane, amine-terminated polyoxyalkylene
polyols having two amino groups, amine-terminated polytetramethylene glycols having two
amino groups, and combinations thereof.

Claim 3 (Previously Presented): The process according to claim 1, wherein the at least one amine having at least three primary and/or secondary amino groups is selected from the group consisting of bis(aminoethyl)amine, bis(aminopropyl)amine, bis(aminobutyl)amine, bis(aminopentyl)amine, bis(aminohexyl)amine, tris(aminoethyl)amine, tris(aminopropyl)amine, tris(aminohexyl)amine, trisaminohexane, 4-aminomethyl-1,8-octaenediamine, trisaminononane, N-(2-aminoethyl)propanediamine, N,N'-bis(3-aminopropyl)ethylenediamine, N,N'-bis(3-aminopropyl)butanediamine, N,N,N',N'-tetra(3-aminopropyl)ethylenediamine, N,N,N',N'-tetra(3-aminopropyl)butanediamine, melamine, an oligomeric diaminodiphenylmethane (polymer MDA), an amine-terminated polyoxyalkylene polyol with a functionality of three or more, a polyethyleneimine with a functionality of three or more, a polypropyleneimine with a functionality of three or more, and combinations thereof.

Claim 4 (Cancelled).

Claim 5 (Previously Presented): The process according to claim 1, wherein any amine or combination of amines reacted with the at least one urea, at least one thiourea, or a combination thereof, has an average amine functionality of from 2.1 to 5.

Claim 6 (Previously Presented): The process according to claim 1, wherein the reacting is conducted in the presence of a solvent.

Claim 7 (Previously Presented): The process according to claim 6, wherein the solvent is selected from the group consisting of decane, dodecane, benzene, toluene,

chlorobenzene, dichlorobenzene, xylene, dimethylformamide, dimethylacetamide, solvent naphtha, and combinations thereof.

Claim 8 (Previously Presented): The process according to claim 1, wherein the reacting is conducted in the absence of a solvent.

Claim 9 (Previously Presented): A functionalized, branched polyurea prepared by the process of claim 1.

Claim 10 (Cancelled).

Claim 11 (Previously Presented): The process of claim 1, wherein the reacting is conducted in the absence of a catalyst.

Claim 12 (Previously Presented): The process of claim 1, wherein the reacting is conducted in the presence of at least one catalyst.

Claim 13 (Previously Presented): The process of claim 12, wherein the at least one catalyst is selected from the group consisting of an alkali metal hydroxide, an alkaline earth metal hydroxide, an alkali metal hydrogen carbonate, an alkaline earth metal hydrogen carbonate, an alkali metal carbonate, an alkaline earth metal carbonate, a tertiary amine, an ammonium compound, an organic compound of aluminum, an organic compound of tin, an organic compound of zinc, an organic compound of titanium, an organic compound of zirconium, an organic compound of bismuth, and combinations thereof.

Claim 14 (Previously Presented): The process of claim 12, wherein the catalyst is potassium carbonate.

Claim 15 (Previously Presented): The process of claim 1, wherein the reacting is conducted in the presence of at least one catalyst, and wherein the reacting is conducted in the absence of a solvent.

Claim 16 (Previously Presented): The process of claim 15, wherein an amine liberated during the reacting is not separated off by distillation.

Claim 17 (Previously Presented): The process of claim 15, wherein an amine liberated during the reacting is separated off by distillation.

Claim 18 (Previously Presented): The process of claim 1, wherein the functionalized, branched polyurea is, post formation, subject to a subsequent functionalization.

Claim 19 (Previously Presented): The process of claim 1, wherein the functionalized, branched polyurea is not, post formation, subject to a subsequent functionalization.

Claims 20 and 21 (Cancelled).